

The Zygote Human Anatomy Collection 3.5 & 4.0 Upgrades

Zygote 3D Human Anatomy Collections are the most comprehensive and well crafted collections available today. These collections have been in development since 1995 and are continuously being upgraded with ever increasing detail and features. This PDF outlines the features and details that were introduced as versions 3.5 and 4.0 of the Zygote 3D Human Anatomy Collections.

Features Included in Version 4.0 Since the Release of Version 3.5

Upgraded Muscular System

- General Improvement of the Superficial Muscles of the Back, Foot, Hand & Knee
- New Deep Muscles of the Back
 - Rectus capitis anterior, lateralis, posterior minor & major
 - Rectus capitis lateralis
 - Longus capitis & colli
 - Obliquus capitis superior & inferior
 - Rotatores cervicis, thoracis & lumborum (longus & brevis)
 - Semispinalis thoracis, cervicis & capitis
 - Longissimus thoracis, cervicis & capitis
 - Iliocostalis cervicis, thoracis & lumborum
 - Multifidus
 - Serratus Posterior Inferior & Superior
- New Deep Muscles of the Foot
 - Flexor hallucis brevis
 - Lumbricals
 - Quadratus plantae
 - Flexor digiti minimi brevis
 - Adductor hallucis
 - Plantar interosseous
 - Dorsal interosseous
- New Muscles of the Hand
 - Palmaris brevis
 - Lumbricals
- New Muscle of Knee
 - Plantaris
 - Popliteus

Upgraded Connective Tissue

- General Improvement of the Connective Tissue of the Knee, Pelvis & Foot
- New Connective Tissue of the Pelvis
 - Obturator membrane
 - Sacrotuberous ligament
 - Sacrospinous ligament
 - Anterior sacroiliac ligament
 - Posterior sacroiliac ligament
 - Anterior sacrococcygeal ligament
 - Lateral sacrococcygeal ligaments
 - Iliolumbar ligament
- New Connective Tissue of the Knee
 - Arcuate popliteal ligament
 - Lateral patellar retinaculum
 - Medial patellar retinaculum
 - Posterior ligament of the head of fibula
 - Interosseous membrane
 - Oblique popliteal ligament

- Bursa beneath Semimembranosus tendon
- Bursa beneath iliotibial tract
- Bursa beneath fibular collateral ligament
- Bursa beneath biceps femoris tendon
- Bursa beneath lateral & medial heads of gastrocnemius
- Anserine bursa
- Subcutaneous prepatellar bursa
- Deep infrapatellar bursa
- Knee joint capsule
- New Connective Tissue of the Foot
 - Plantar aponeurosis
 - Superior & Inferior extensor retinaculum
 - Superior & Inferior peroneal retinacula
 - Flexor retinaculum
 - Plantar calcaneonavicular ligament
 - Long plantar ligament
 - Plantar calcaneocuboid ligament
- Upgraded Nervous System
 - New Dura Mater Sheathing the Spinal Cord
 - New Ventral and Dorsal Nerve Roots
 - New Spinal Ganglia
 - New Thoracic Sympathetic Trunk and Ganglia
- Upgraded Lymphatic System with Appropriate Ducting and Drainage

Features Introduced in Version 3.5 Following 3.0

Upgraded Nervous System – Our upgraded Nervous System model has increased detail to the Brain including a Cerebrum better revealing typical features such as landmark sulci and gyri; it also now includes internal brain anatomy. Newly improved grouping better enables users to easily select and show any feature of the brain; now simply add transparency to the Cerebrum and Cerebellum to reveal anatomical features deep within the Brain.

Upgraded Features to Brain 3.5 include:

- Increased Cerebral Definition Increased Cerebral Definition
- Central Sulcus
- Superior Frontal Sulcus
- Lateral Sulcus
- Precentral Gyrus
- Postcentral Gyrus
- Superior Frontal Gyrus
- Interior Anatomy
- Basal Ganglia
- Caudate Nucleus
- Putamen
- Globus pallidus
- Lateral Medial
- Fornix
- Mamillary Bodies
- Amygdaloid Bodies
- Body of Fornix
- Hippocampus
- Thalamus
- Hypothalamus
- Subthalamic Nucleus
- Substantia Nigra
- Lateral Ventricle

- Interventricular Foramen
- Third Ventricle
- Cerebral Aqueduct
- Fourth Ventricle

Insula and Brain Stem models are available separately.

Upgraded Circulatory System – Our upgraded Circulatory System model now includes much more detailed and accurate vessels to and from every organ. Branches of arteries and veins providing circulation to viscera as well as reproductive organs now enables illustration of blood flow from the heart to every organ and extremity of the body.

Upgraded Features of the Circulatory System 3.5

- Vasculature of Liver
- Vasculature of Stomach
- Vasculature of Kidneys
- Vasculature of Large and Small Intestines
- Vasculature of Spleen
- Vasculature of Pancreas
- Vasculature of Reproductive Organs

New Connective Tissue Model – Our new Connective Tissue model now is sold as part of the Male and Female Anatomy Collections 3.5. Each joint of the appendicular skeleton is included - from the Distal Interphalangeal Joints of the hands and feet, to the Ligaments and Acetabular Surfaces of the shoulders and hips. Each individual ligament and bursa is modeled independently and grouped so that users can easily focus illustrations or animations on relevant joint anatomy.

Joints included in the Connective Tissue Model 3.5 include:

- Interphalangeal Joints of the hands and feet
- Metacarpophalangeal Joints
- Metatarsophalangeal Joints
- Deep Transverse Metacarpal and Metatarsal Ligaments
- Ligaments of Wrist
- Ligaments of Ankle
- Interosseous Membranes of Arm and Leg
- Ligaments and Cartilage of Knee
- Ligaments and Capsule of Elbow
- Ligaments and Cartilage of Hip
- Ligaments and Cartilage of Shoulder

Organ Texture Map Upgrade – With version 3.5, texture maps are available not only for the exteriors of every organ, but now a texture and bump map is also available for the interior of the Stomach.

Male Reproductive System Upgrade – Our Male Reproductive System has been upgraded to now include much greater anatomical detail. Synchronizing with our version 3.5 Circulatory System, blood flow to and from the male Reproductive System can be illustrated along with detailed structures of male anatomy.

Upgrades to the Male Reproductive System 3.5 include:

- Detailed Blood Vessels to Testis and Penile Tissue
- Detailed Testicles with Rete Testis and Seminiferous Tubules
- Tunica Albuginea
- Efferent Ductules
- Epididymis
- Ductus Deferens
- Cremaster Muscle

- Scrotal Fascia
- Detailed Seminal Vesicle
- Detailed Prostate
- Prostatic Utricle
- Ejaculatory Ducts

Lymphatic System Upgrade – Upgrades have been made to the Lymphatic System to improve its positioning in relation to other systems of the body. Now users will more easily illustrate the relationship of Lymph Nodes to other anatomical features of the body.

Muscle System Upgrade – The male Muscle System now includes muscles of the pelvic floor, and has been upgraded with increased connective tissue details in the texture map.